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United States  
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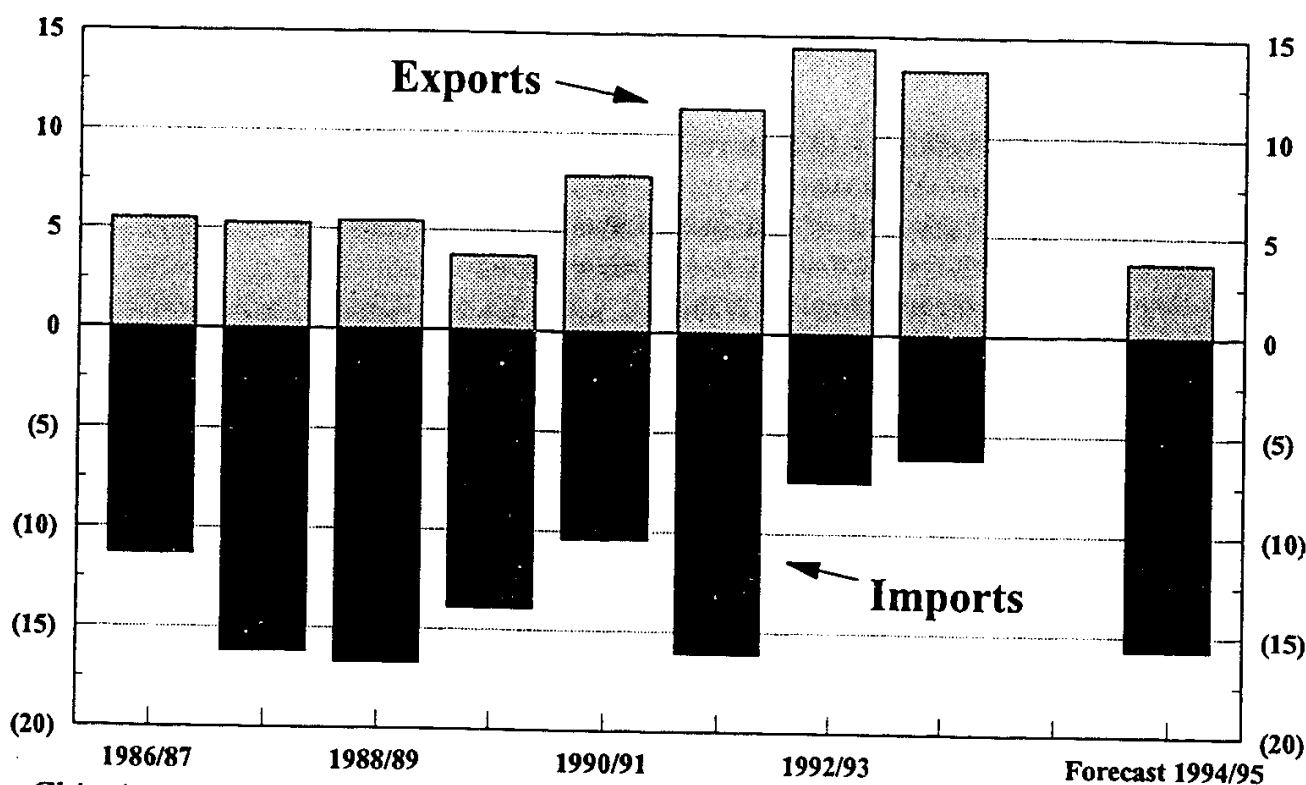
Foreign  
Agricultural  
Service

Circular Series  
FG 2-95  
February 1995

# Grain: World Markets and Trade

## China Total Grain Trade Deficit Resumes As Imports are Forecast at Near Record Levels

Million metric tons



China's suspension of new corn export contracting, import purchases of corn and a more than doubling of wheat imports over 1994/95 levels moves China back into their more traditional net import position for grain.

Record levels of corn exports and reduced wheat import volumes during the last two years (July/June for wheat, October/September for coarse grains and calendar years for rice) shifted China from a net importer position. However, strong internal demand for wheat and corn during 1994/95 have sharply reversed this position. Demand from the rapidly expanding feed sector has driven domestic corn prices up sharply. The forecast sharp reduction in rice exports and near record forecast import volume also contribute to the net import total grain position.

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## **EXECUTIVE SUMMARY**

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### **SITUATION/OUTLOOK**

- o China's cancellation of 630,000 tons of corn purchases from the U.S. indicates that their 1994/95 imports may now only reach 2.5 million tons.
- o The rice export forecast for the United States for 1995 was raised slightly to 2.8 million tons, the highest level since 1989.
- o The wheat import forecast for Egypt and Iran increased by 800,000 tons and 500,000 tons respectively.
- o Forecast Russia and Uzbekistan wheat imports were reduced by a half million tons each, as lower production in Kazakhstan reduced exportable supplies.
- o 1995 rice import expectations for Indonesia were raised to 1.25 million tons, the highest level since 1980, when a record 2.0 million tons was imported.
- o Based on the large volume of exports and sales to date, the rice export forecast for Thailand in 1995 was raised 300,000 tons to 4.9 million tons, second only to the record 6.0 million ton export level set in 1989.
- o The rice export forecast for Burma was raised from 800,000 tons to 1.0 million tons as export commitments for 1995 have already reached an estimated 700,000 tons.

### **FOREIGN COUNTRIES' POLICIES AND PROGRAMS**

- o China's grain markets show effects of fundamental change, population growth, and urbanization.
  - o European Union production and exports of wheat starch and gluten have recently increased due to a combination of CAP reform, subsidies, and domestic market protection.
  - o The effects of peso devaluation on Mexican grain imports.
  - o European Union announces plans to subsidize exports of 200,000 tons of Finnish and Swedish oats.
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## **WORLD AND U.S. GRAIN OVERVIEW**

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### **WHEAT**

This month's forecast for 1994/95 world wheat trade rose 800,000 tons to 97.7 million. Expansion resulted from an increase in the pace of Egypt purchases, and an expected rise in Iran imports. World trade is still down 1.8 million tons from last year, partially because trade in feed quality wheat has diminished from the substantial levels of the last two years.

The forecast for the 1994/95 world wheat crop of 524.1 million tons is the lowest since 1988/89. Consumption is expected to outstrip production for the second consecutive year, with projected ending stocks declining 20 percent to 115.4 million tons. This represents the lowest global stock level since 1981/82. The stocks-to-use ratio is forecast at 20.9, down 4.5 points from last year's level of 25.4.

### **RICE**

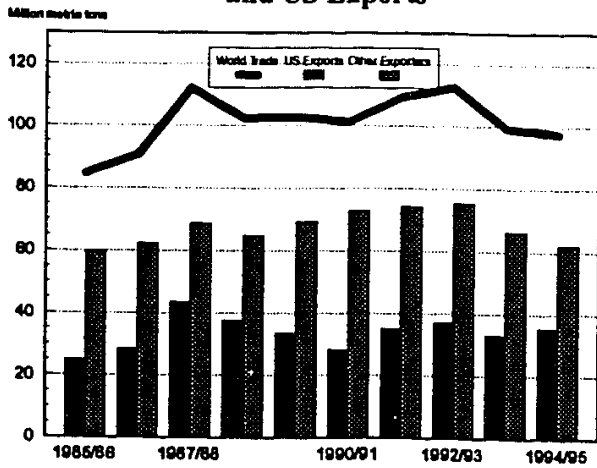
The forecast for calendar year 1995 rice trade is up slightly, as the pace of exports and imports to date prompted reevaluation of respective supply and demand estimates. The export estimates for Thailand and Burma were each raised 300,000 and 200,000 tons respectively, on the basis of a robust level of export commitments. Global production in 1994/95 is projected virtually unchanged at a record 523 million tons. Projections for rice consumption in 1994/95 are down 1.3 million tons from last month's record forecast of 357 million tons, while global stock levels are projected at 46 million tons, a slight decrease from last month's projection. As a result of a revision of the Indonesian rice series from 1960 to the present, some shifting of estimates of global historical consumption and stock levels has occurred.

### **COARSE GRAINS**

The forecast for 1994/95 coarse grains trade is down 1.5 million tons, due largely to a reduction in forecast corn imports by Russia and China. However, expected trade remains more than 3.0 million tons higher than the 1993/94 level. While there were no changes to U.S. production estimates, reductions in foreign production dropped global production 2.5 million tons to 863.9 million. However, 1994/95 production is still 900,000 tons above the previous record set in 1992/93. Projections for consumption in 1994/95 are down 2.0 million tons from last month's forecast of a record 856.8 million tons, while there is virtually no change in forecast stock levels.

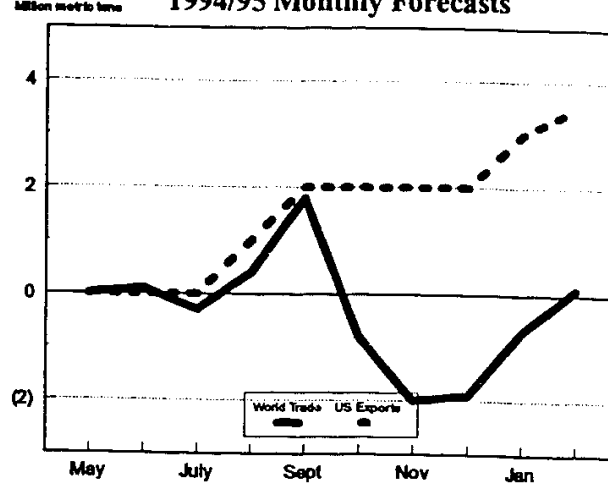
# World Grain Trade

## World Trade and US Exports

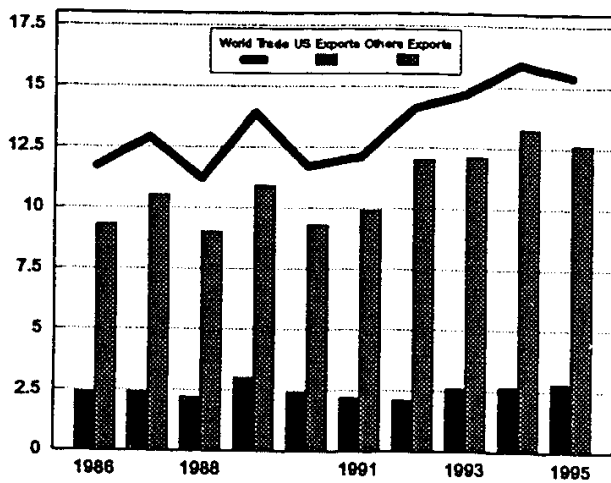
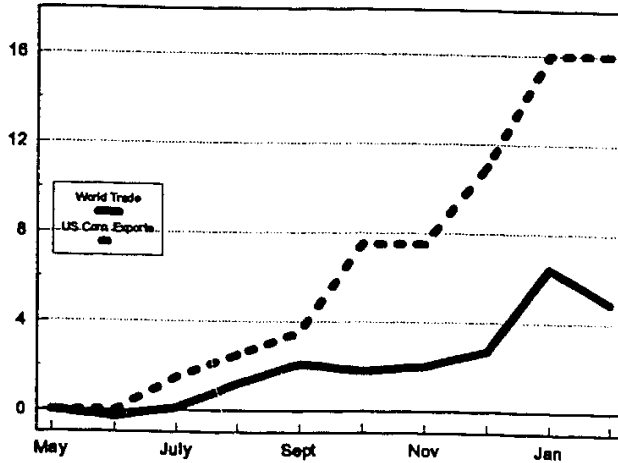
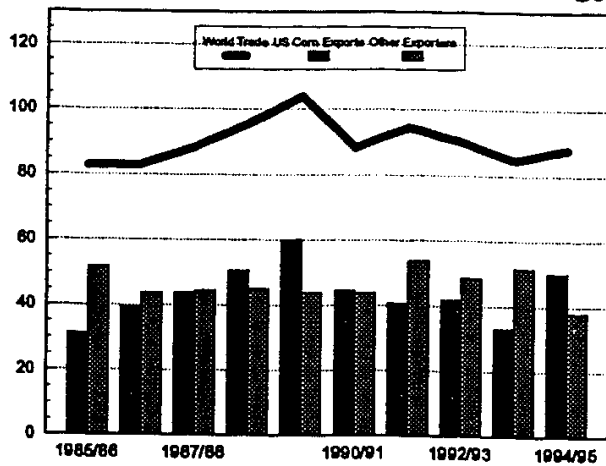


## Wheat

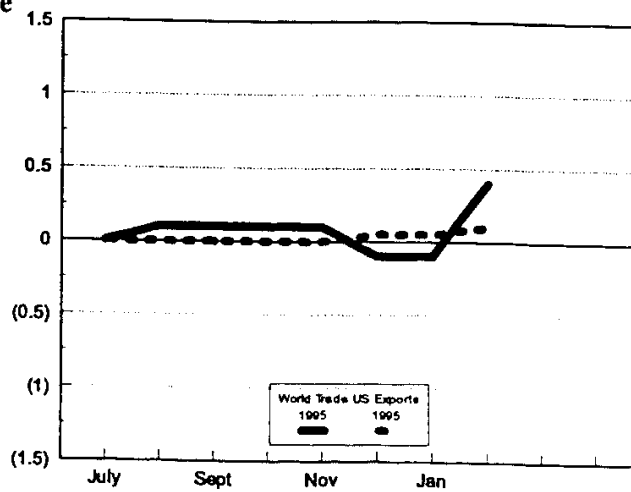
## Cumulative Change in 1994/95 Monthly Forecasts



## Coarse Grains



## Rice



**ALL GRAIN SUMMARY**  
**PRODUCTION, CONSUMPTION, STOCKS AND TRADE**  
**TOTAL FOREIGN COUNTRIES, USA, AND TOTAL WORLD**  
**(MILLION METRIC TONS)**

	1990/91	1991/92	1992/93	1993/94	1994/95 Jan 12	1994/95 Feb 10
<b>WHEAT</b>						
All Foreign Countries						
Production	513.7	488.7	494.7	493.7	464.3	461.0
Consumption	526.1	527.7	513.2	530.1	519.4	518.8
Ending Stocks	122.6	117.4	133.9	127.9	105.2	103.0
USA						
Production	74.3	53.9	67.1	65.2	63.2	63.2
Imports	0.9	1.2	1.9	3.2	2.3	2.4
Consumption	37.2	30.8	30.7	33.7	33.6	33.3
Exports	28.3	35.1	37.1	33.1	35.0	35.5
Ending Stocks	23.6	12.9	14.4	15.5	12.7	12.4
World Total, Trade	101.2	109.3	112.5	99.5	96.9	97.7
<b>RICE</b>						
All Foreign Countries						
Production	345.6	344.5	346.9	346.0	347.5	347.0
Consumption	342.9	348.5	352.0	353.7	353.8	352.7
USA						
Production	5.1	5.1	5.7	5.0	6.3	6.3
Imports	0.2	0.2	0.2	0.2	0.3	0.3
Consumption	3.0	3.1	3.1	3.1	3.2	3.2
Exports	2.2	2.1	2.6	2.7	2.8	2.8
World Total, Trade	12.1	14.1	14.7	15.9	14.9	15.4
<b>TOTAL COARSE GRAINS</b>						
All Foreign Countries						
Production	591.0	584.3	585.6	600.2	581.3	578.8
Consumption	630.9	620.3	635.0	643.2	645.7	643.5
USA						
Production	230.7	218.6	277.4	186.5	285.0	285.0
Imports	1.8	2.2	1.5	4.6	2.7	2.7
Consumption	178.7	185.1	198.7	185.9	211.2	211.2
Exports	51.8	50.2	50.1	40.0	56.9	56.9
Ending Stocks	47.8	34.0	63.1	27.4	48.1	47.9
World Total, Trade	88.3	94.4	90.2	84.6	89.4	87.9
<b>WORLD TOTAL GRAIN, INCLUDING RICE</b>						
All Foreign Countries						
Production	1,450.3	1,417.5	1,427.2	1,439.9	1,393.1	1,386.8
Consumption	1,499.9	1,496.5	1,500.2	1,527.0	1,518.9	1,515.0
USA						
Production	310.1	277.6	350.3	256.6	354.5	354.5
Imports	2.9	3.6	3.6	8.0	5.3	5.4
Exports	82.3	87.4	89.9	75.8	94.7	95.2
World Total, Trade	201.6	217.7	217.4	200.0	201.2	201.0

Trade data are reported on an international year basis. All other data are reported using marketing years. Rice production data is on a milled basis.

**U.S. GRAINS: SUPPLY AND DISTRIBUTION  
WHEAT, CORN, SORGHUM, BARLEY, OATS, RYE AND RICE  
THOUSAND METRIC TONS/HECTARES**

	Area			--Imports--		--Exports--		Domestic	Domestic	Ending
	Harvested	Yield	Production	Mkt Yr.	Trade Yr.	Mkt Yr.	Trade Yr.	Feed Use	Total Use	Stocks
<b>WHEAT (MY JUNE/MAY)</b>										
1990/91	27,965	2.7	74,292	991	935	29,106	28,328	13,129	37,150	23,627
1991/92	23,392	2.3	53,891	1,108	1,196	34,899	35,117	6,653	30,799	12,928
1992/93	25,399	2.6	67,135	1,905	1,857	36,838	37,136	5,285	30,688	14,442
1993/94	25,379	2.6	65,220	2,962	3,161	33,414	33,084	7,459	33,738	15,472
1994/95	24,998	2.5	63,157	2,449	2,400	35,380	35,500	6,804	33,285	12,413
<b>CORN (MY SEPT/AUG)</b>										
1990/91	27,095	7.4	201,534	87	50	43,807	44,496	118,447	153,324	38,641
1991/92	27,851	6.8	189,868	499	452	40,238	40,597	123,887	160,821	27,949
1992/93	29,169	8.3	240,719	180	166	42,249	41,766	134,536	172,927	53,672
1993/94	25,463	6.3	160,954	529	519	33,741	33,148	119,477	159,819	21,595
1994/95	29,509	8.7	256,629	127	150	49,532	50,000	143,517	186,699	42,120
<b>SORGHUM (MY SEPT/AUG)</b>										
1990/91	3,678	4.0	14,563	2	0	5,898	5,788	10,406	10,627	3,622
1991/92	3,994	3.7	14,856	0	0	7,410	7,457	9,501	9,717	1,351
1992/93	4,876	4.6	22,227	0	0	7,041	6,634	11,901	12,091	4,446
1993/94	3,608	3.8	13,569	0	0	5,120	5,318	11,495	11,687	1,208
1994/95	3,629	4.6	16,638	0	0	5,588	5,600	10,160	10,351	1,907
<b>BARLEY (MY JUNE/MAY)</b>										
1990/91	3,047	3.0	9,192	293	443	1,755	1,507	4,459	8,283	2,948
1991/92	3,405	3.0	10,110	534	515	2,057	2,090	4,897	8,735	2,800
1992/93	2,948	3.4	9,908	248	195	1,748	1,611	4,188	7,916	3,292
1993/94	2,733	3.2	8,666	1,556	2,042	1,438	1,553	5,249	9,053	3,023
1994/95	2,698	3.0	8,162	1,306	1,000	1,524	1,300	4,899	8,709	2,258
<b>OATS (MY JUNE/MAY)</b>										
1990/91	2,407	2.2	5,191	1,093	1,211	9	8	4,153	6,068	2,485
1991/92	1,949	1.8	3,539	1,289	1,131	28	50	3,414	5,431	1,854
1992/93	1,819	2.3	4,271	948	1,094	83	89	3,382	5,347	1,643
1993/94	1,539	1.9	3,001	1,841	1,923	44	21	2,805	4,909	1,532
1994/95	1,627	2.1	3,336	1,724	1,450	15	15	2,903	4,989	1,588
<b>RYE (MY JUNE/MAY)</b>										
1990/91	152	1.7	258	99	125	5	5	195	411	84
1991/92	160	1.5	247	115	97	1	3	191	407	38
1992/93	158	1.8	291	79	60	0	1	152	369	39
1993/94	154	1.7	263	117	156	0	1	176	394	25
1994/95	164	1.7	283	140	130	0	1	203	423	25
	Area		--Production--		--Imports--		--Exports--		Domestic	Ending
	Harvested	Yield	Rough	Milled	Mkt Yr.	Trade Yr	Mkt Yr.	Trade Yr	Total Use	Stocks
<b>RICE (MY AUG/JULY)</b>										
1990/91	1,142	6.2	7,081	5,098	152	163	2,317	2,197	2,999	868
1991/92	1,125	6.4	7,228	5,096	169	172	2,123	2,106	3,068	876
1992/93	1,267	6.4	8,149	5,704	194	199	2,445	2,641	3,077	1,252
1993/94	1,146	6.2	7,081	4,957	219	240	2,523	2,650	3,078	827
1994/95	1,342	6.7	8,971	6,280	254	250	2,826	2,800	3,239	1,296

**Notes:**

Wheat trade year statistics are on a July/June year. Barley, corn, sorghum, rye, and oats trade year statistics are on an Oct/Sept year. Rice trade year statistics are for the subsequent calendar year.





# FOREIGN COUNTRIES POLICIES AND PROGRAMS

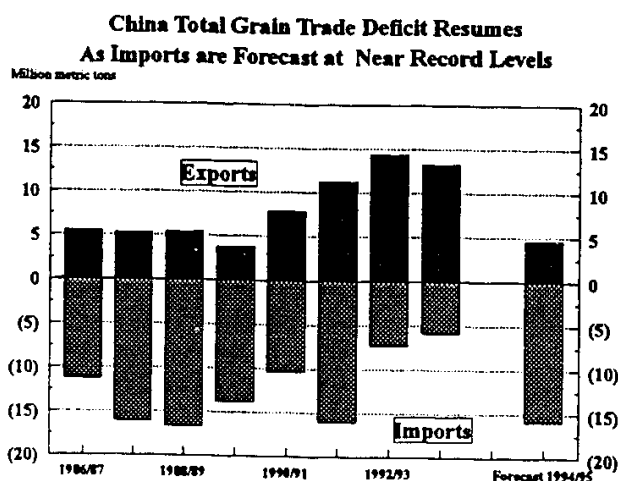
## China's Evolving Grain Markets

In recent years grain trade has become both more open and more complex in China as efforts to establish a more market-oriented economy compete with ideologies of self-sufficiency and price stability. Several state affiliated corporations have been established with the authority to trade grain, and end users are now largely able to stipulate contract specifics though they are not able to purchase directly and thus realize any price benefits. In practice, strict control is maintained by the traditional sole grain trading entity, China National Cereals, Oils, and Foodstuffs Import Export Corporation (CEROILS). The authority that Ceroils maintains is further supported by current market conditions.

Internal Chinese grain prices increased significantly during 1994 due to higher procurement prices offered to farmers and a slight decrease in production coupled with increases in demand. The higher grain prices are believed to be a substantial factor contributing to the overall 24 percent inflation rate last year. This occurred as more grain was moving outside government channels, which limited the governments ability to control prices through the release of stocks.

There now appears to be a movement on the part of the Chinese government to attempt to regain control of the grain market. Officials have recently stated that the State must control 70 to 80 percent of grain and oil in commercial circulation and improve the centralized grain reserve system in order to stabilize prices and ensure supplies.

China's return to a net import position is a sharp contrast to the record-setting net export positions enjoyed over the past two years. The seriousness of the agricultural and economic situation is apparent when import projections for the current year are compared with historical import levels. Not only are imports for all grains expected to reach the third-highest level of the past 10 years, but exports are forecast to be at the second-lowest levels for the same time period. The decision to purchase significant quantities of U.S. corn and wheat, as well as record-setting



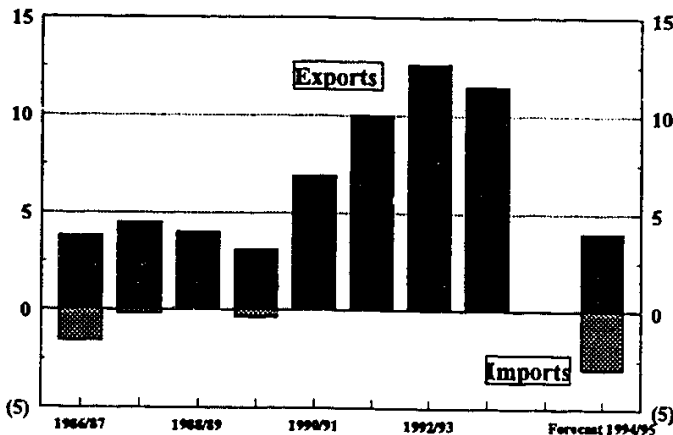
quantities of rice from Thailand, are an indication of the seriousness with which China's Government views the situation, and that further domestic price increases will be strongly resisted. The collective actions of the Chinese government emphasize the problems that the country faces in ensuring that market forces work to fulfill their growing demand for grain.

## COARSE GRAINS

If correct, the 1994/95 coarse grain forecast for China will result in China's net trade position changing from that of a major exporter to that of a net importer. In September 1994, China was forecast to be a net exporter of 10.7 million tons of coarse grains; at present, however, it is expected to be a net importer of half a million tons. The major change has been in corn which has gone from forecast exports of 12 million tons and no projected imports to a forecast of 3 million tons in exports and 2.5 million tons in imports. China has imported barley for a number of years as beer production has expanded, particularly premium beer brewed in joint-venture operations. China is currently forecast to import 1.2 million tons of malting barley, down slightly, due to tight world supplies, from the earlier forecast of 1.5 million tons. China is still forecast to export 200,000 tons of sorghum, compared with the 250,000 tons estimated for 1993/94.

China Corn Exports Forecast Sharply Lower as Internal Demand Surges  
US Sales to China Now Total 2.1 MMT

Million metric tons



The 9 million year-to-year reduction in China's corn export forecast, coupled with the expected 2.5 million tons of imports by China, has resulted in 11.5 million tons of import demand in 1994/95 available to non-Chinese corn exporters that was not present in 1993/94. China's corn imports and demand in markets normally supplied by China is being met almost exclusively by the United States. The dramatic shift in China's corn trade position resulted from largely reduced exportable supplies, brought about by increased domestic demand and on-farm hoarding resulting in prices rapidly escalating beyond world

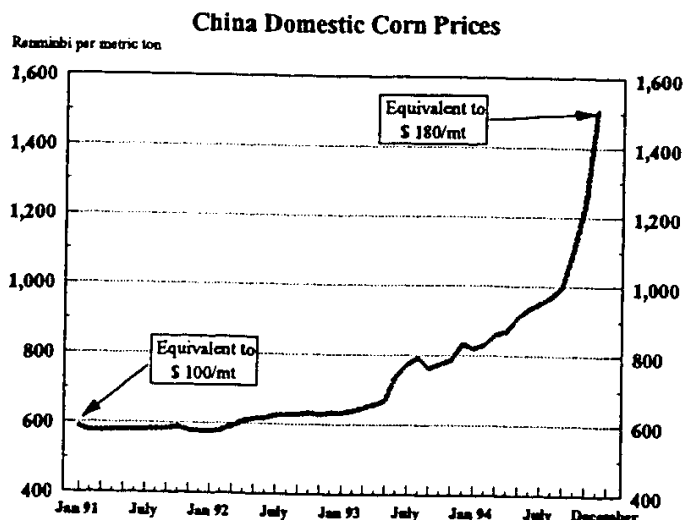
levels. The inability of China to fully meet its export contracts starting in the fall of 1994, led to the official pronouncement of a ban on exports in place in December.

Corn utilization in China grew at 3.3 million tons annually between 1989 and 1992. It is projected that growth in 1994 was well above this level. Demand for corn in China is rising from large joint-venture livestock operations in the south producing for export and rising meat consumption throughout the country. Increased demand for meat, poultry and eggs in China has

been driven by double digit economic growth during the past decade which has resulted in higher real income as wages have been increased along with inflation.

In January 1994, the Government of China announced an increase in the state purchasing price for corn to 800 Renminbi or roughly \$94 per ton. The price was to become effective April 1994. This price rise led to stockpiling by both farmers and consumers. Open market prices for corn took off, with those for consumers in southern China reaching the equivalent of \$225 per ton in December, while farmers in the north were receiving approximately \$150 per ton.

Exports for the first 8 months of 1994 continued at record highs because CEROILS and the provincial exporters had already secured the bulk of their stocks. However, as old crop stocks were used up and domestic prices continued to rise, farmers began holding onto new crop production and shortages developed both for export to third countries and to sell to consumers in the southern provinces.

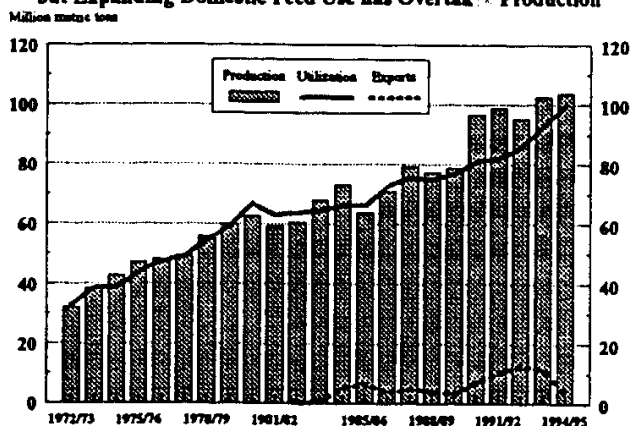


In response the Government released corn stocks, raised the State purchasing price to 840 Renminbi per ton or the equivalent of \$99 per ton, suspended exports and purchased U.S. corn. These actions are meant to help alleviate the shortages in the south, but the resumption of exports remains on hold. Reports indicate that farmers started selling some corn in January, driven by the need for cash during the New Year holidays and fears of deteriorating quality from on-farm storage. However, domestic demand is so strong that prices did not decline as the limited new supplies released onto the market were quickly snatched up by domestic consumers.

China's growth in corn exports during the 1990's were fueled by dramatic increases in corn production. Average production rose 45% from, 68.5 million tons in 1983-85 period to 99 million tons in the 1991-93 period. This production increase was fueled by a 15% increase in area and a 26% increase in yields. Yields have been augmented by subsidized inputs, particularly diesel fuel and fertilizer as well as hybrid seeds provided by the state. Corn yields in China are estimated at a record 5.0 tons per hectare for 1993/94 and 1994/95, as compared to the record yield in the U.S. of 8.7 tons per hectare, achieved in 1994/95. The big jump in exports, starting in 1990, occurred as production far outpaced consumption gains.

China built its corn export success largely around four Asian markets, South Korea, Japan, Malaysia, and Indonesia. During the past five years these four markets have purchased three

**China Corn Production Surge in the 1990's Pushed Exports Higher  
but Expanding Domestic Feed Use has Overtaken Production**



quarters of China's total corn exports. Imports of corn in Japan and South Korea has remained basically flat during the period of Chinese export growth, thus Chinese sales were at the expense of other suppliers. In Japan, the main losers were Argentina and South Africa, though the latter's position was more dependant production over the same time period. In South Korea, China managed to gain almost the entire market which had previously been dominated by the U.S. Additionally, large imports of feed wheat helped

meet South Korea's growing demand for grains for feeding use. Both Malaysia and Indonesia recorded substantial growth in imports during this period, with this growth being met almost exclusively by China as the previous supplier, Thailand, moved out of corn exports as domestic demand grew to account for nearly all of production.

China has been very competitive in these markets for a number of reasons, with low prices being China's major marketing tool. With state-controlled domestic prices at well below world market prices, China has been in a position to consistently undercut U.S. and other corn exporters, as well as meet strong periodic competition from feed quality wheat. The inferior quality of the corn from China early in its export years was tolerated because of this price discount. China enjoys a freight advantage to many of these markets, which had been accentuated by the vessel size limitation of off-loading facilities at ports in Malaysia and Indonesia: neither country has been able to handle 50,000 ton "Panamax" vessels, which reduce shipping costs for the U.S. and other suppliers from outside the region. This however, will soon change, as ports in both countries are scheduled to open "Panamax" berths in 1995. China will continue to have an advantage in South Korea, since the northern river ports near Seoul will continue to be unable to receive "Panamax" vessels.

## Wheat

China is the world's largest wheat grower, producing roughly 20 percent of the world's total output. Wheat constitutes about a quarter of China's total grain production. Crop yields have increased substantially over the last thirty years, with 1993/94 reaching a record yield of 3.5 tons per hectare, and record production at 106 million tons. By comparison, U.S. wheat yields are about 2.5 tons per hectare.

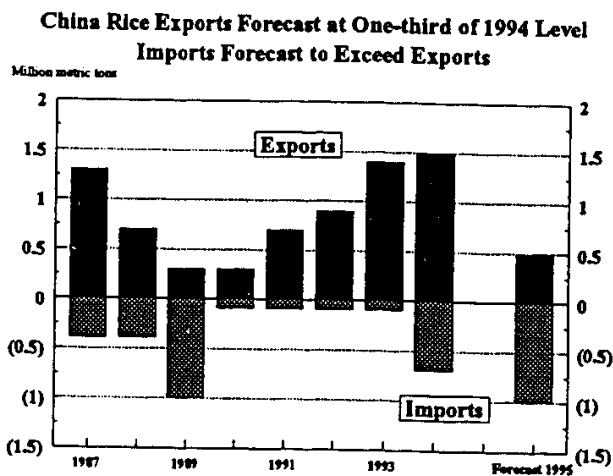
In spite of its vast production, China has remained a net importer of wheat. The volume of imports is subject to substantial year-to-year fluctuations, with shifts of 5 to 10 million tons not uncommon. Imports in 1994/95 are expected to rise sharply to a projected 11 million tons, from

the 1993/94 level of 4.3 million. Imports in 1993/94 were at the lowest point in 17 years, taking China out of a top-three global importer position for the first time in as many years.

Per capita consumption has not grown for 10 years, as population growth continues to drive increasing demand. Imports have long helped maintain a stable utilization growth trend. Canada, the United States, and Australia are the primary suppliers of wheat to China. In the current July/June marketing year, Canada has shipped 2.7 million tons through November, Australia shipped 0.6 million through December, and the United States has committed a total of 3.8 million tons as of mid-January.

## RICE

China, the world's largest rice producing country, harvests over one-third of all the rice grown in the world. Rice comprises about 40 percent of China's grain production, and is grown predominantly in the southeastern third of the country. The third or fourth largest exporter throughout the 1960's, 70's, and 80's, China is projected to be in a net import position in CY 1995, only the second time since WW II. Heavy shipments from Thailand in the last two months of 1994 are expected to continue through the first quarter of 1995, as is a substantial quantity of "unreported" border trade with Vietnam that is not included in official U.S. statistics. Trade sources indicate that this unreported trade could have been as high as 250,000 tons in 1994, with heavier-than-usual levels expected in 1995.



Most of the cause behind the current import program is declining production. In 1990/91 China's production reached a record 189 million tons (rough basis), whereas the current forecast for the 1994/95 crop is only 174 million tons, despite 1994/95 having the second highest forecast yield in history. This decline is the result of a loss of area planted to rice. According to press accounts, the loss of acreage to industrialization is nearly 100,000 hectares per year, and much rice land has been diverted by farmers into more profitable crops. When faced with a similar situation in the late 1980's, China's central government reacted by intensifying policies to encourage rice production at the expense of cash crops. To date there have been no announcements from Beijing indicating that a similar program is being considered today. Rather, the central government has acted to revoke individual provincial authority to export rice, and declared an indefinite suspension of exports in an effort to increase domestic availability of rice and slow inflation on foodstuffs.

The bulk of China's import demand is being met by Thailand, which is estimated to have exceeded 500,000 tons in export commitments already booked, most for delivery by the end of February. Additionally, there is an unconfirmed level of Chinese purchases of Vietnamese rice, which the Vietnamese Government is attempting to curtail in an effort to counter rising domestic prices, particularly in the northern areas. There is a small quantity of U.S. rice entering China, both in direct sales and transshipments out of Hong Kong and Singapore. However, given the pricing considerations that China is expressing to exporters, large volumes of U.S. rice moving into China appears unlikely.

## OVERALL CONSUMPTION TRENDS

Outweighing by far any dietary trends, the growth in China's population will be responsible for the changes occurring in China's total consumption of grains. Already, China's population is estimated by the Chinese government to be 1.2 billion, which 10 years ago was the population goal for the year 2000. Clearly, population containment programs, while partially effective, are far from achieving a zero growth rate. However, certain dietary trends are beginning to exhibit themselves.

As can be seen in the accompanying graph, utilization of food grains (wheat and rice) are falling on a per capita basis. Conversely, coarse grain use is on the rise, offsetting the decrease in per capita food grain consumption. This increase in coarse grain utilization represents increases in production of poultry products, pork, beef, and aquaculture. This trend is similar to that observed in other Asian cultures as disposable income has increased. Since 1970, per capita consumption of food grains has fallen from nearly 400 pounds per person per annum to less than 300 pounds in Japan, from over 450 to only 350 pounds in South Korea, and from over 450 to less than 250 pounds in Taiwan. China, by way of comparison, attained a peak level of food grain consumption in 1985/86, at a level of 467 pounds per capita, and current estimates for 1994/95 food grain consumption are slightly less than 450 pounds. While it is extremely unlikely that Chinese consumption patterns would move to levels similar to Japan, South Korea, and Taiwan in the near term, it is certainly indicative of the direction of movement that may be expected.

